

## ABSTRACT OF THE DISCLOSURE

An optical shuffle/interconnect system having an imaging system defining an input image plane and an output image plane. An optical perfect shuffle is combined with the imaging system for rearranging spatial components of an object located proximate the input image plane into a rearranged image within the output image plane. The optical perfect shuffle having at least one surface used for rearranging of said spatial components incident on the at least one surface of the optical perfect shuffle.

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